A Visit With Our Neighbors

Frontier students take racing project seriously

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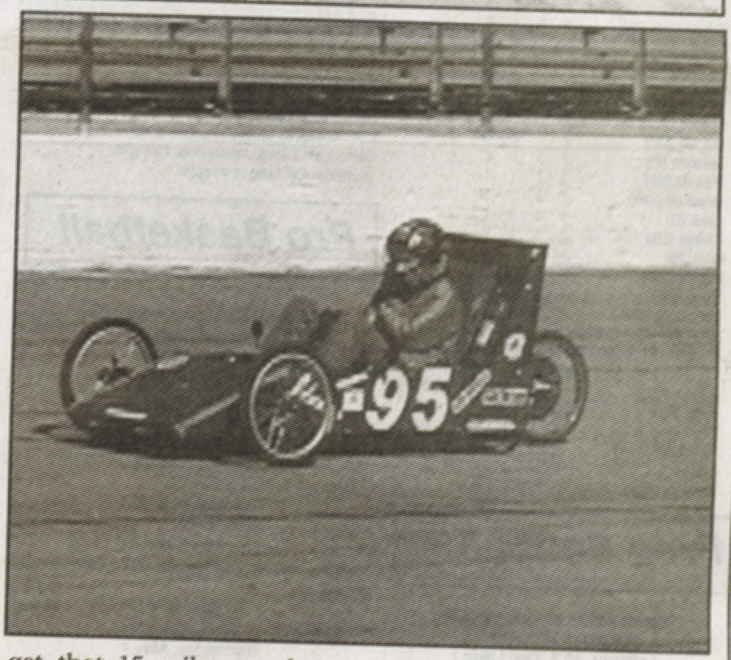

Team members Devon Morgan (left) and Caleb Olis-Cartmell assemble the car frame for Frontier's first entry in the Super Mileage Challenge.The finished car goes through its paces at Indianapolis Raceway Park on April 25. Frontier's team placed fourteenth out of 34 entries in the stock engine class and took the top award for closest estimated-to-actual gas mileage per gallon.

Photos provided

In one corner of the Frontier Jr.-Sr. High School wood shop, a trophy case is being built to display the school's growing collection of awards, including one earned with a racing car built in the room next door.

The 8½ foot long, three wheeled go-cart was the Frontier Super Mileage Challenge Team's entry this Monday near Indianapolis.

In this race, it's not about who finishes in the shortest time, but who gets the best gas mileage getting there.

The event is sponsored by the Indiana Math, Science and Technology Education Alliance (IMSTEA) and challenges each participating high school to explore ways to achieve the highest miles per gallon figures over a fixed course — the 5/8 mile oval at Indianapolis Raceway Park in Clermont.

Now in its tenth year, the competition marked the first entry by a team from Frontier School Corporation.

The school became involved after a callout to students by Gene Rausch, Technology Education Instructor at the high school.

Rausch learned of the event through IMSTEA and serves as the team's advisor.

And now, for the trophy: As part of a 20-page written proposal, students were asked to estimate their car's mile per gallon fuel efficiency before the race.

"The team that got the closest to their estimate got the trophy," said Rausch. "They estimated 250 — they got 236."

"For the first year, we were ideal," said junior Joshua Anliker, who along with freshmen Jeremy Heath, Mark Moore and Matt Musgrave

Months before any starting signal, students had to submit a working design for their vehicle and calculate such factors as wind resistance, stopping distance and cornering force

get that 15 miles per hour over the 10 laps, they were disqualified."

Other standardization required that each driver weigh 150 pounds – accom-

D.O.T.-certified crash helmet.

"You had to have either a face shield or a canopy or you had to be enclosed," said Rausch.

Frontier's team opted to

Project: Frontier students construct their car from scratch

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junked them together."

Team members took turns driving the day of the race, stopping only to refuel.

Between turns behind the wheel, each member served as part of the pit crew.

"We had two people at the wall — one at the radio to talk to the driver and the other was keeping track of laps," Rausch said.

Drivers also had to work their way through traffic, with anywhere from 2-20 running cars at a given time, he said.

Before any of this could take place, however, the team was also responsible for raising money through sponsorships by local businesses to fund the construction of their car.

"We made up a brochure and went around to businesses," explained Olis Cartmell.

Not all the donations were monetary, however.

"Frontier's Ag department gave us the room and the welding equipment," Rausch noted.

Some materials such as steel were donated and the team received discounted rates on work such as wheel building.

Flush with their first success, the team is already looking ahead.

Next year, they agreed, they are looking into something "more streamlined."

"Next year, I'd like to start in September so we can take our time," said Rausch.

"We're going to build a whole new car," said Moore.

The fate of this year's car is undecided, but the engine will be reused next year, and the team said other components may see new life as part of a future racer.

"Next year, we'll be using something much lighter, like aluminum or composite," suggested Rausch. "We'll just have to see what they come up with."

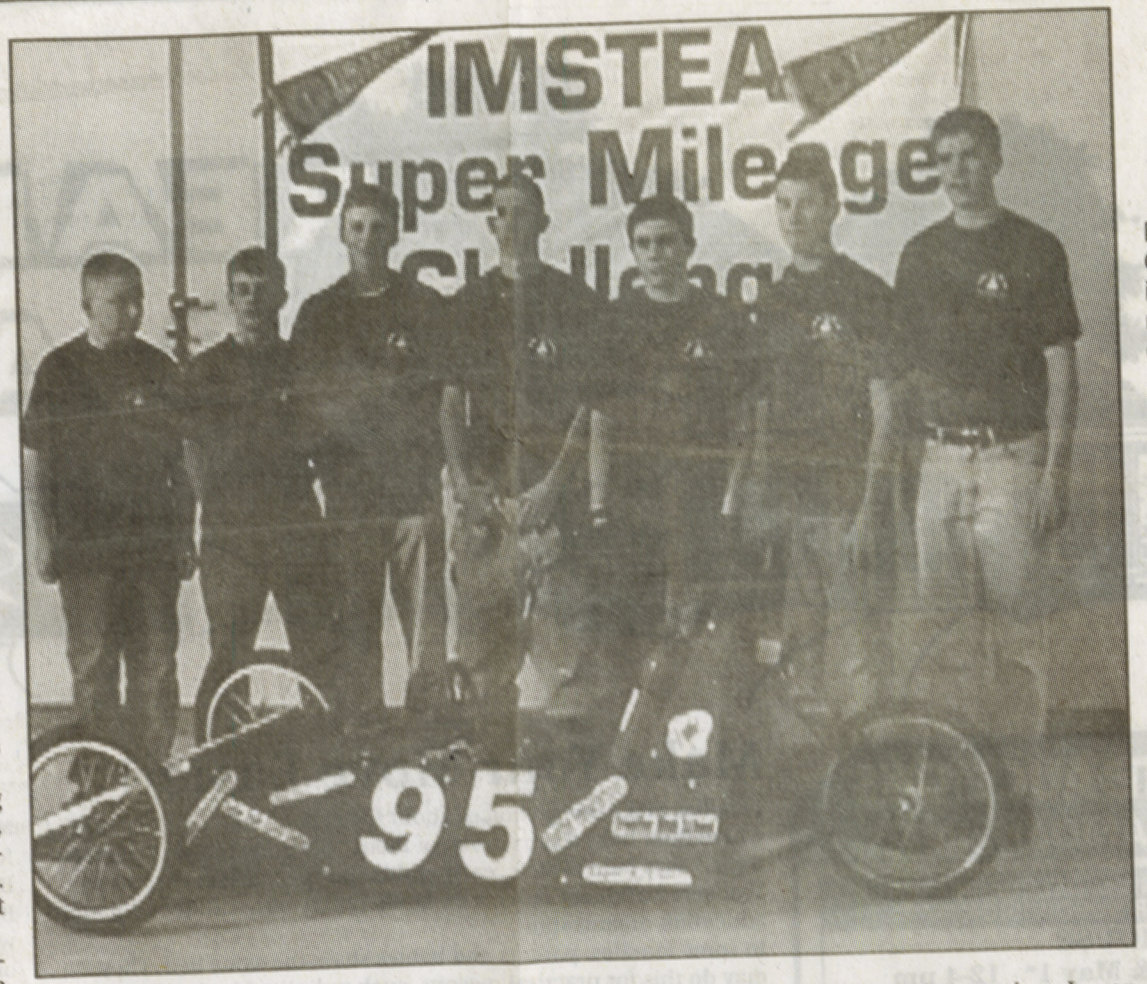
All seven student members plan on participating in next year's Challenge, and there is room for more.

Each team can consist of up to 14 students, Rausch noted.

Looking back, he said, "They were the second car out on the track. It started at 8:30 and they ran constantly till 3:30.

"That's something, because with a lot of the cars, all they did was work on them and still not make it out on the track.

"It went better than I ever would have expected," he said. "They went out and ran for seven straight hours without a failure; I don't think you can ask anything more than that."



Frontier's first Super Mileage Challenge team with their finished vehicle. All seven team members took turns driving during the seven-hour competition, which is held annually to determine which Indiana high school students' designs could achieve the best fuel economy using a standardized engine with standardized fuel over a fixed course.

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